GA1.13:PEMD-86-7BR
OCT 1 1987

United States General Accounting Office

GAO

Briefing Report to Congressional Requesters

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March 1986

HUNGER COUNTIES

Methodological Review of a Report by the Physician Task Force on Hunger

GAO/PEMD-86-7BR

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

PROGRAM EVALUATION
AND
METHODOLOGY DIVISION

March 18, 1986

B-222232

The Honorable Bill Emerson
The Honorable E. Thomas Coleman
Subcommittee on Domestic Marketing,
Consumer Relations, and Nutrition
Committee on Agriculture
House of Representatives

In January 1986, the Physician Task Force on Hunger in America issued a report entitled Hunger Counties 1986. The main finding of this report was a list of the 150 counties with the "worst" hunger in the United States. The underlying analysis, according to the report's authors, was part of the continuing work of the task force to identify and assess the nature and scope of domestic hunger and to enlighten the public and policymakers as to its causes and solutions. The list of "hunger counties" is closely related to criticisms that the task force has made, in the report and elsewhere, of the federal food stamp program, and the report has resulted in significant debate.

On February 5, 1986, you asked the U.S. General Accounting Office (GAO) to review and evaluate the report. (Your letter is printed as appendix I.) In agreement with your staff, we decided to focus on the technical soundness of the report and assess the strength of the conclusions drawn from the analyses described in the report. In particular, we wanted to examine the indicators that the authors of the report had adopted for the identification of the "hunger counties" along with the data and methods that they used.

In responding to this request, we reviewed Hunger Counties 1986 and other relevant reports, and we interviewed officials of the Food and Nutrition Service of the U.S. Department of Agriculture, the Physician Task Force on Hunger in America, and other experts familiar with the issues of hunger, poverty, and the allocation of food stamps. Our review focused on these issues only as they relate to Hunger Counties 1986. We did not attempt to determine whether hunger in the nation is a large problem (that is, the relative or absolute size of the problem) or whether it is growing or the incidence of poverty in the United States or the efficiency and effectiveness of the food stamp program.

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Determining the distribution of hunger is indeed an important and policy-relevant enterprise, but we have found major limitations in the approach taken by the Physician Task Force. Although the task force did list some of these limitations, it maintains that they did not vitiate the overall integrity and credibility of the report. We, however, believe that the study's overall methodological limitations are such as to cast general doubt on the study's results.

In particular, we question

1. the choice of indicators for hunger and food stamp participation (for example, hunger was equated to the shortfall in food stamp participation in high-poverty counties),

2. the data used to estimate the number of persons eligible for food stamps, and

3. the methods used to identify the counties named as "hunger counties" and those that are low in food stamp participation.

In sum, we believe that these methodological issues severely damage the credibility of the results of Hunger Counties 1986.

As arranged with your staff, we are sending a copy of this report to the Honorable Marge Roukema. Unless you publicly announce the contents of this report earlier, we will make no further distribution of it for 30 days. Thirty days after the date of the report, copies will be available to those who request them. For further information, please address Carl Wisler, Associate Director, Program Evaluation and Methodology Division (202-275-3092).

Eleanor Chelimsky
Director

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1. THE BASIC ISSUES

The January 1986 report of the Physician Task Force on Hunger in America, entitled Hunger Counties 1986, listed what it called the 150 "hunger counties" in the United States, counties in which "large numbers of citizens experience hunger and high risk of nutritional deprivation."[1] The identification of "hunger counties" continued the research and field work that the task force conducted in 1983 and 1984, a major product of which was a book published in 1985 entitled Hunger in America, arguing that hunger is a growing problem in the United States.

The aim of Hunger Counties 1986 was apparently to carry the argument two steps further. The report attempted to identify the geographic areas of the country where need is greatest and to show that the federal food stamp program is at least partially responsible for needs not being met in those areas. The essential difficulty in determining the distribution of hunger is devising a valid way of measuring hunger.

The task force attempted to look at the incidence of hunger and poverty in the nation and at the rates of food stamp participation. Specifically, its study was undertaken to

1. document the distribution of counties with the worst poverty and poorest food stamp participation in the United States,

2. quantify what the report called the "hunger gap" in the counties by comparing the need of the nation's poorest families and the food stamp assistance actually provided for them, and

3. establish a basis for analyzing barriers to the more effective use of this key food assistance program.[2]

The method of the task force consisted of two steps. First, data on all counties in the United States were reviewed in order to identify the counties in which 20 percent or more of the population was below the poverty level in 1979. The task force found that 716 counties met this criterion. Second, an indicator was calculated by the task force to estimate the 1984 food stamp participation rates for the 716 counties. The 150 counties with the lowest indicator values were adjudged the "hunger counties" of

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[1]Physician Task Force on Hunger in America, Hunger Counties 1986--The Distribution of America's High-Risk Areas (Cambridge: Harvard University, 1986), p. 7.

[2]Hunger is defined in the report by the existence of two factors: more than 20 percent of a county's residents live on incomes below the federal poverty level and fewer than one third of the eligible, needy residents receive the benefits of the federal food stamp program.

the nation. For these 150 counties, the participation rate was 33 percent or lower. We discuss the procedures of the task force in detail in later sections.

The task force report also expressed concern that the federal food stamp program had been weakened. In particular, it suggested that program participation rates are inappropriately low, and it associated recent program changes with the problem of hunger.

The publication of the task force report was followed by heated debate. Officials of the Food and Nutrition Service (which administers the food stamp program), officials in some of the 150 counties, and others criticized Hunger Counties 1986, claiming that the study did not adequately determine the geographic distribution of hunger. Some have contested the complaints of the task force about the operation of the food stamp program. The task force responded by stating its belief that the study's results reflected the geographic distribution of hunger and poverty and the problems with the food stamp program.

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2. OBJECTIVE, SCOPE, AND METHODOLOGY

OBJECTIVE

In this methodological review, we evaluated the technical soundness of the conclusions reported in Hunger Counties 1986 by examining the indicators, methods, and data used by the task force. Specifically, we focused on the following evaluation questions:

1. How did the task force determine the distribution of poverty, participation in the federal food stamp program, and hunger?

2. How well did the method of the task force determine the distribution of poverty in the United States?

3. How well did the method of the task force determine the distribution of food stamp participation?

4. How well did the method of the task force determine the distribution of hunger in the United States?

In the context of the task force report, distribution is a rank ordering of units, such as counties, according to some characteristic of the units, such as the degree of poverty. The answer to question 1 is therefore simply a description of the ordering procedures used by the task force. The answers to questions 2 and 3 examine the soundness of the procedures the task force used in determining the county-by-county distribution of poverty and participation rates in the food stamp program. The procedures have a bearing on our answer to question 4, on the method the task force used in determining the distribution of hunger.

SCOPE

Concentrating on the technical soundness of Hunger Counties 1986, we focused on the issue of the distribution of hunger. In our review, we have not provided estimates of the relative or absolute degree of hunger or nutritional deprivation in the United States. Nor have we drawn conclusions about the earlier work of the task force, which argued that hunger in the United States is serious and growing. Finally, we did not evaluate the efficiency and effectiveness of the food stamp program.

METHODOLOGY

To answer our evaluation questions, we reviewed Hunger Counties 1986 as well as the related documents listed in our bibliography in appendix II. We verified our understanding of the task force report in discussions with the research director and the chairman of the task force. In these discussions, we reviewed the methodology used in the task force report and the limitations of the study, some of which were presented in the task force report. We met with representatives of the Food and

Nutrition Service to discuss the operation of the food stamp program and their views of the task force report. We also discussed the task force report with other experts on poverty, food stamps, and hunger.

Given the time limitations of our review (6 weeks), most of our work was confined to drawing out the logical implications of the task force's methodology rather than doing empirical analyses to test the assumptions or to explore the possibilities of alternative data bases. Although we did have enough time to perform a few independent analyses, we believe other analyses could be usefully performed to further explore questions about the distribution of poverty, food stamp participation, and hunger.

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3. HOW DID THE PHYSICIAN TASK FORCE DETERMINE THE DISTRIBUTION OF POVERTY, FOOD STAMP PARTICIPATION, AND HUNGER?

The "hunger counties" were selected by means of a poverty indicator and a food stamp participation indicator. All U.S. counties could be separated into the four groups that make up the possible combinations of poverty and food stamp participation:

	High poverty	Low poverty
High food stamp participation	--	--
Low food stamp participation	Hunger counties	--

The poverty indicator was the percentage of a county's population that fell below the federal poverty level in 1979.[1] The dividing line, or cutoff value, between high and low poverty was taken as 20 percent. The food stamp participation indicator was the estimated percentage of county residents participating in the food stamp program in 1984. The 150 counties with the lowest food stamp participation indicators were listed in the task force report. Thus, the dividing line between high and low participation was 33 percent. The task force designated counties high in poverty and low in food stamp participation "hunger counties."

THE POVERTY INDICATOR

The first step in the task force procedure reduced the number of counties in consideration from the 3,142 counties in the United States to 716, on the basis of the county-level poverty indicator. The poverty indicator was the ratio of two numbers: the number of persons in a county with incomes below the federal poverty level divided by the total number of persons in the county. (The task force used 1980 decennial census data for these numbers.[2]) The counties in which this ratio was greater than 20 percent constituted the nation's high-poverty counties.

THE PARTICIPATION INDICATOR

The participation indicator was also a ratio: the number of food stamp recipients in a county divided by the number of persons

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[1]The current definition of poverty by the Bureau of the Census is in appendix III.

[2]U.S. Department of Commerce, Bureau of the Census, City-County Data Book: 1983 (Washington, D.C.: 1983).

eligible to receive food stamps in the county. A direct estimate of the first number was available from published sources, but the second was not. Therefore, the task force used a surrogate.

The participation indicator for a county was expressed in the following equation: participation indicator = A/BC. In this equation, A = the number of food stamp recipients in July 1984 (given in Department of Agriculture data); B = the number of persons with incomes below 125 percent of the poverty level in 1979 (given in decennial census data); and C = the change between 1979 and 1984 in the number of persons with incomes below 100 percent of the poverty level in the region of the country in which the county is located (given in current population survey data). Thus, B times C, or the estimate of the number of a county's residents in poverty, was the surrogate for the number of persons eligible for food stamps in that county.

An indicator value near zero implied a low food-stamp participation rate; a value near 1 implied a high participation rate. The task force ranked counties by this indicator and designated the 150 counties with the lowest participation indicators "hunger counties." (We list the task force "hunger counties" in appendix IV.)

Estimates of food stamp participants

The number of food stamp participants for July 1984 can generally be extracted from data published by the Food and Nutrition Service.[3] However, these data do not give the number of participants in 12 counties. The task force obtained participation data for the missing counties from state and local officials. Also, for a few counties inhabited by major populations of Native Americans, the task force added to the number of food stamp participants the number of participants in the Food and Nutrition Service's tribal commodity plan on Indian reservations. The total was variable A in the equation above, or the numerator indicated in the ratio.

Estimates of the number of persons eligible for food stamps

Food stamp eligibility involves several criteria that include income, assets, and household size and composition. The first eligibility test for food stamps is that a household's income for the month of application for stamps must be less than 130 percent

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[3]U.S. Department of Agriculture, Food and Nutrition Service, Food Stamp Program Statistical Summary of Operations (Washington, D.C.: 1985).

of the poverty level.[4] Another test for food stamp eligibility is family assets (such as cash reserves and motor vehicles), which may render a family ineligible even though its income is low.

No data are available on the actual number of persons eligible for food stamps. However, the task force tried to approximate the number by first determining county population below 125 percent of the poverty level in 1979 (the B variable in the equation) and then adjusting this figure for the change in eligible population between 1979 and 1984 (because the numerator was estimated for 1984).[5]

However, these data are also limited, so the adjustment factor that the task force used was the change in regional population below the federal poverty level between 1979 and 1984.[6] Data on population change were available only in aggregate form and corresponded to four regions of the country (Northeast, South, North Central, and West). Therefore, the adjustment factor could take on only four different values.

In summary, the task force estimated the number of persons eligible for food stamps from Bureau of the Census data on the number of persons living in poverty. The estimate was not based on a direct determination of the number of county residents eligible for food stamps.

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[4]To be eligible for food stamps, a household (except households with an elderly or disabled person) must have a gross income of less than 130 percent and a net income of less than 100 percent of the poverty level. For the purpose of our study, the gross income measure (130 percent) is more relevant than the net measure.

[5]U.S. Department of Commerce, Bureau of the Census, Characteristics of Population Below the Poverty Level: 1981 (Washington, D.C.: 1983).

[6]U.S. Department of Commerce, Bureau of the Census, Estimates of Poverty Including the Value of Noncash Benefits: 1984 (Washington, D.C.: 1985).

4. HOW WELL DID THE PHYSICIAN TASK FORCE DETERMINE THE DISTRIBUTION OF POVERTY IN THE UNITED STATES?

The task force undertook to document the distribution of poverty in the nation's counties. Three factors can influence this distribution--the poverty indicator, the data base, and the data analysis method. These three factors plus the cutoff value determined which counties were identified as the high-poverty counties. We examined the three factors and the cutoff value.

THE POVERTY INDICATOR

The task force determined the geographic distribution of poverty by examining the percentage of the population in each county living below the federal poverty level. There is at present considerable interest in reexamining and possibly redefining the "federal poverty level."[1] To the extent that the current procedure for determining the federal poverty level accurately reflects the poverty of a person or a household, the indicator the task force used reflects the incidence of poverty within a county.

THE DATA BASE

With respect to the data the task force used to compute the poverty indicator, the main concern is whether changes occurred in the distribution of poverty after the data were collected in 1979. If they did, which seems very likely, the list of 716 counties may inaccurately portray the actual distribution of poverty in 1984. However, the task force used what is to our knowledge the most recently available data at the county level, and there is no other way of systematically determining the distribution of poverty in all counties with some other data base.

THE DATA ANALYSIS

We found no problems with the method the task force used to analyze the poverty data.

THE CUTOFF VALUE

Once the task force had specified the poverty indicator and selected the data base, the distribution of counties by poverty had been set. The only factor that could then have affected the labeling of counties "high poverty" was the cutoff value. The choice of a cutoff value is ultimately a judgment decision. The task force selected a cutoff value of 20 percent, which resulted in the list of 150 counties.

Other values would have led to other lists of "high poverty" counties by adding or subtracting counties according to their

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[1]Possible change in the definition of the poverty level is the focus of another study currently under way in GAO's Program Evaluation and Methodology Division.

ranking by the poverty indicator. For example, two earlier studies on hunger used a cutoff value of two times the national poverty rate.[2] Applying this criterion to the 1979 national poverty rate (11.7 percent) as a base would yield a cutoff value of 23.4 percent. Of the 150 counties identified as high-poverty counties, 80 would have poverty indicator values lower than the cutoff value and would thus no longer be considered "high poverty" counties. Using twice the 1984 poverty rate (14.4 percent) as a base would yield a cutoff rate of 28.8 percent, and 132 of the 150 counties would no longer be considered "high poverty" counties.

SUMMARY

In sum, the task force used a standard way of measuring the incidence of poverty in U.S. counties. With respect to the data base, we believe that the task force used one that appears to have been the most current. But we must observe that although the choice of a cutoff value to determine high-poverty counties is a subjective matter, the designation of high-poverty counties depends upon the cutoff value that is chosen. In this case, the choice of a 20-percent value resulted in a list of 150 hunger counties. Small changes in the cutoff value could add or delete many counties from the list.

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[2]Citizens' Board of Inquiry into Hunger and Malnutrition in the United States, Hunger, U.S.A. (Boston: Beacon Press, 1968), and U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, Hunger 1973 (Washington, D.C.: 1973). The poverty rate is the percentage of persons in the nation whose incomes are below the federal poverty level (see appendix III).

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5. HOW WELL DID THE PHYSICIAN TASK FORCE DETERMINE THE DISTRIBUTION OF FOOD STAMP PARTICIPATION?

As with the calculation of the distribution of poverty, several factors can influence the distribution of counties with respect to participation in the food stamp program. Three are the participation indicator, the data for computing the indicator, and the data analysis method. Given a distribution of counties, defining a set of counties as low in participation depends on the choice of a cutoff value, the fourth factor.

THE PARTICIPATION INDICATOR

For a participation indicator, the task force chose the number of food stamp participants expressed as a percentage of the number of persons eligible for food stamps. While this indicator measured what might be called the "relative degree" of participation in the food stamp program, it was not sensitive to program participation in an absolute sense.

The difference between a relative indicator and an absolute one can be illustrated as follows. Suppose that a county has 30,000 persons eligible for the food stamp program and that 3,000 of these persons participate. An indicator of the absolute level of nonparticipation in this county would then simply be the number of persons not participating--that is, 30,000 - 3,000, or 27,000. A relative indicator of participation in the same county would be the ratio 3,000/30,000; expressed as a percentage, the figure would be 10 percent.

Either indicator might be appropriate, depending on the objective of the analysis. However, listing the counties in rank order by these two indicators would lead to two quite different distributions. The reason for this is that U.S. counties differ greatly in the number of persons eligible for food stamps, partly because U.S. counties differ greatly in population. For example, Loving County, Texas, has a population of 90; Cook County, Illinois, has a population of more than 5 million.

A consequence of using a relative participation indicator is that the task force method does not account well for counties where participation rates are high but, nevertheless, large numbers of people do not participate, as in counties with large numbers of eligible persons. A county of 250,000 residents eligible for food stamps with a participation rate of 85 percent would have 37,500 nonparticipants. In contrast, the estimated number of nonparticipants in Eureka, Nevada (the county with the lowest participation rate on the list, 1.71 percent), was 585 persons. This means that the characterization by the task force of counties with low participation must be used cautiously. There may be large numbers of nonparticipants in counties with high participation rates.

We may put the effect described above somewhat into context by noting that the average population of the 150 counties was 12,000 while the average population in counties across the nation

was 70,000.[1] It could be argued that the greatest need for reducing hunger is in counties that have large numbers of people who do not participate in the food stamp program, counties where the participation rate is not necessarily low. Using a relative indicator, as the task force did, would not produce the 150 counties with the largest absolute number of nonparticipants.

THE DATA BASE

The data base that the task force used for computing the participation indicator was problematic in the following ways. First, July 1984 data were used in place of average annual 1984 data. Second, the estimate of the number of persons eligible for food stamps in 1979 did not account for the assets test. Third, the data reflecting change from 1979 to 1984 were insensitive to some county-to-county variations. Fourth, monthly data (the number of food stamp recipients) were combined with yearly data (the number eligible for food stamps). Fifth, some of the data were based on a sample rather than a census, so that we have some concern about sampling error in the participation indicator.

The use of the July 1984 number of participants rather than an average for the year

Using the number of participants in July 1984 limited the conclusions of the task force report. This is because participation might have varied throughout the year, and if it did vary but not uniformly across the counties, the distribution of counties by participation might have fluctuated from month to month. The task force noted this limitation in its report. We examined the monthly variation to see if we could draw any conclusions about its effect on the distribution of food stamp participation.

The Food and Nutrition Service discontinued publishing monthly data on counties in late 1981, after which it published county data for only January, April, July, and October. The question that arises is whether it is proper to use July 1984 data rather than a yearly "average" calculated from data for only these 4 months.

For the 138 counties of the 150 for which we had data, we calculated the relative differences between July 1984 and January, April, and October 1984. For these 138 counties, we found increases that were statistically significant between July and

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[1]It would be better to illustrate this point by comparing the national average population to the average for all counties for which the task force participation indicator was less than 33 percent, but the report did not include the necessary information.

January and between July and April but not between July and October (using the standard paired t test). Calculated as a ratio and expressed as a percentage, with July as the base, the relative increase was 13 percent in January and 12 percent in April and there was a 3 percent decrease in October.

We believe that using July 1984 data to represent food stamp participation in 1984 probably created some distortion in the distribution of counties. However, since we cannot be sure that this distortion would be important for individual counties, we do not regard the task force procedure as a major limitation.

The method for estimating the number of persons eligible for food stamps in 1979

To estimate the number of persons eligible for food stamps in 1984, the task force began by estimating the number eligible for food stamps in 1979, but there are several methodological problems with using the 1979 estimates.

One problem is that the first term in the denominator was the number of persons with incomes below 125 percent of the poverty level in 1979 but, to be consistent with the eligibility test for food stamps, the task force should have used 130 percent. Data were not available on the number of persons with incomes below 130 percent. The result of the 5-percent discrepancy is that adding persons between 125 percent and 130 percent of the poverty level would increase the denominator by some unknown amount. The task force reported this as a limitation. We believe that it is not a major concern.

However, we think the task force seriously overestimated the number of eligible participants because data were not available with which to adjust for persons who were eligible for food stamps by the income test but not by the assets test. Because information on assets is not available county by county, it is impossible to estimate the effect of applying an assets test to the county data. However, it is known that approximately 25 percent of food stamp applicants who are eligible by income on the national level are ineligible when an assets test is applied. If the national figure were applied uniformly to the task force calculations, 52 of the 150 "hunger counties"--that is, more than a third--would no longer have food stamp participation rates below 33 percent. The 150th county would have a participation rate of 44 percent.

This is a major limitation. Regardless of the absence of data that would make the denominator reflect, at the county level, persons who were eligible by income but not by assets, their effect could logically be quite variable and sizable. A designation of counties as low or high in participation could change substantially if the assets of county residents were taken into account. The task force listed this limitation.

The adjustment from 1979 to 1984 data

The aim of the task force was to compute the participation indicator with 1984 data. Although this was possible for the numerator, 1984 data were not available for the denominator. The task force estimated the B variable with 1979 data and used a multiplier, the C variable, to adjust the denominator so that it would approximate 1984 data. The question is whether or not this adjustment seriously distorted the distribution of counties when they were ranked by the participation indicator and, in particular, whether the distribution of counties that fell below the cutoff value would change substantially.

The adjustment variable was based on data from the current population survey conducted by the Bureau of the Census.[2] The information necessary for updating the denominator--that is, the change in the number of persons with low income between 1979 and 1984--was available only at the regional level (Northeast, South, North Central, and West). The task force multiplied the participation indicator for each of the 716 high-poverty counties by the adjustment variable for the region in which the county was located. All four adjustment factors (Northeast, 1.29; South, 1.15; North Central, 1.47; West, 1.42) increased the estimate of the number of persons with low income in a county.

In trying to gauge the possible effect of the adjustment, our greatest concern was with the distortion from using regional averages as adjustment factors. It is not obvious that all counties, if any, within a region had a change in poverty rate from 1979 to 1984 identical to the regional average. Counties within a region are anything but homogeneous. It seems unreasonable to expect that changes in poverty in Navajo County, Arizona, would be the same as changes in Los Angeles County, California (both in the West), or that poverty rate changes in Alachua County or Dade County, Florida (both in the South), would be the same. The application of broad regional adjustments to produce county estimates introduced unknown, but real, errors in the task force estimates of the participation indicator for the nation's counties.

Another limitation, although a minor one, is that the B variable in the denominator was based on persons below 125 percent of the poverty level but the C variable was based on persons below 100 percent of the poverty level. Using technically more correct, unpublished data supplied to us by the Bureau of the Census but not available to the task force, we recomputed the food stamp participation rate for the 150 counties. We found some very small changes in the estimated food stamp participation rate in some counties but participation rates of 33 percent or less in all 150.

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[2]U.S. Department of Commerce, Bureau of the Census, Estimates of Poverty Including the Value of Noncash Benefits: 1984 (Washington, D.C.: 1985).

In sum, the adjustment method the task force used could have caused two kinds of distortion in its list of low-participation counties. We are concerned the most about the effect of "averaging" with the regional figures. We are not concerned about the effect of the inconsistency of basing some data on 100 percent and other data on 125 percent of the poverty level.

The combining of monthly and annual data

The participation indicator employed, in the numerator, a monthly estimate of food stamp participation and, in the denominator, an annual estimate of persons eligible for food stamps. This could lead to error in estimating the actual proportion of persons in a county who participated in the program and to distortions in the distribution of counties.

The total number of persons who participated in the food stamp program at any time in 1984 was approximately 34 million, but during the year, some number went on and off the rolls; thus, the average participation in a month was less than the total yearly participation. In 1984, the average number of food stamp recipients in any given month was about 20 million.

In the method the task force used, the actual proportion of participants will be overestimated if, for example, an individual is eligible and participates for a few months, and so is counted in the numerator, but does not have low income for the entire year, and so is not counted in the denominator. If the error varies by county, the distribution of counties will be distorted. The importance of this kind of error was indicated in a recent Senate report:

> "while about 95 percent of recipient households have incomes below poverty during their months on the [food stamp] program, only 72 percent had incomes below poverty on an annual basis."[3]

To properly contrast food stamp participation to food stamp eligibility, one should base both terms of the ratio on the same time period. For example, to compare monthly accounting periods, it would be appropriate to divide a month's participation figure (averaging 20 million nationally) by the number of persons who were eligible for the same month. To make a year-to-year comparison, it would be appropriate to divide an annual participation figure (estimated at 35 million nationally) by the number of persons who were eligible during the 12-month period (adjusting to avoid counting participation and eligibility twice in one month). We consider it a major limitation to compare

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[3]U.S. Congress, Senate, Committee on Agriculture, Nutrition, and Forestry, Food Stamp Program: History, Description, Issues, and Options (Washington, D.C.: 1985), p. 397.

monthly participation with annual eligibility; the result of the comparison is serious inaccuracy in the distribution of counties.

Sampling error in the participation indicator

Another possible limitation is sampling error in the participation indicator. The number of food stamp participants represents a complete count and is subject only to nonsampling errors such as administrative errors in counting. The number of persons who are eligible is subject to sampling error, because it is based on samples used by the Bureau of the Census for regional and county estimates of persons living below the poverty level.

We computed the sampling errors, expressed as standard errors, for each of the four values of the adjustment variable.[4] The results were Northeast, 1.29 ± 0.09; South, 1.15 ± 0.06; North Central, 1.47 ± 0.09; and West, 1.42 ± 0.09.

To test the sensitivity of the results of the task force to sampling error, we recomputed the participation indicators for the 150 counties, using the lower boundaries for the ranges on the adjustment variables. This moved 31 of the counties above the 33-percent cutoff value. From this we know that the amount of change in food stamp participation distribution stemming from sampling error is potentially significant. However, our example is an extreme case and, overall, our judgment is that the sampling error should be regarded as a minor limitation of the methodology the task force used.

THE DATA ANALYSIS

One of the aims of the task force report was to show that hunger was associated with low participation in the food stamp program. However, its method did not permit a valid examination of the association, for two reasons. First, the degree of participation was itself part of the way in which hunger was estimated. It was inappropriate to imply an empirical association between hunger and food stamp participation because there was already an association by definition.

Second, the task force did not report on the level of food stamp participation in the low-poverty counties. Participation indicators were, presumably, computed for only the 716 high-poverty counties and were reported for only the 150 counties with the lowest values on the participation indicator. Some of the 2,992 other counties could have had quite low participation rates but were not included in the task force calculations because they were defined as low-poverty counties.

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[4]An explanation of the method is available from GAO's Program Evaluation and Methodology Division.

If the values of the participation indicator were known for all 3,142 counties, and these counties were ranked by this indicator, the 150 counties with the lowest food stamp participation rates could quite likely differ from the task force list of "hunger counties."

Because an association between "hunger counties" and low participation was built into the method, and because there may have been low participation in the 2,992 other counties, it is inappropriate to draw conclusions about a possible empirical association.

THE CUTOFF VALUE

The task force ranked the 716 high-poverty counties by their food stamp participation rates and selected from these the 150 counties with the lowest food stamp participation rates. The county ranked 150th in food stamp participation stood at the 33-percent threshold between high and low participation. The task force then defined "hunger counties" as counties high in poverty with participation rates below 33 percent. As with the cutoff value that the task force used for poverty, there is no right or wrong value for a food stamp participation rate. It must be noted, however, that there is no theoretical basis supporting a cutoff value of 33 percent.

6. HOW WELL DID THE PHYSICIAN TASK FORCE DETERMINE THE DISTRIBUTION OF HUNGER IN THE UNITED STATES?

Hunger Counties 1986 reported an estimate of the distribution of hunger in U.S. counties that combined the indicators we described in the two previous sections on poverty and food stamp participation. Ultimately, the soundness of this method depends on how closely this distribution of counties corresponds to the actual distribution of the people in the nation who suffer from hunger. However, there is no direct way of making the comparison because the actual distribution is, of course, not known. Our judgment about technical soundness must be based on the methodology itself.

The term "hunger counties" was used in a 1968 report of the Citizens' Board of Inquiry into Hunger and Malnutrition in the United States. The concept was also used in a 1973 report by the Select Committee on Nutrition and Human Needs of the U.S. Senate. Hunger Counties 1986 stated that the criteria and purposes of the Physician Task Force on Hunger in America closely paralleled those in the previous attempts to define "hunger counties." However, table 1.1 on the next page shows that there are differences in the criteria in the three reports.

In the Citizens' Board study, counties were tabulated by poverty, food assistance, and an indicator of the link between nutrition and infant mortality. That infant mortality is related to other factors such as medical care may be the reason that the only indicators the task force used were poverty and food stamp participation. In addition, the poverty indicator in the Citizens' Board study was based on households; the studies of the Select Committee and the Physician Task Force based it on individuals below the poverty level.

Aside from the problem of "hunger counties" as a concept, we have difficulty believing that the task force method accurately depicted the distribution of hunger in the United States. Several of the limitations in its participation indicator apply also to the calculation of the distribution of hunger. Our main concern is that the method the task force used for determining the distribution of hunger did not measure hunger directly, in the sense of estimating the degree of chronic underconsumption of food and other nutrients.

The usual recourse in this situation would be to seek a combination of factors that were highly correlated with the variable that could not be directly measured (in this case, hunger), and this is what the task force attempted to do. It equated hunger to the shortfall in food stamp participation in high-poverty counties. In other words, the task force assumed that poverty and food stamp participation were related to hunger and devised a method for indirectly estimating its distribution.

Our difficulty is with the strength of the assumed relationship. If the relationship was somewhat weak and if other factors were also related to hunger, then the distribution of counties calculated by the task force was inaccurate. Two

Table 1.1

Measures of "Hunger County" in Three Reports

Measure	1968 Citizens' Board	1973 Select Committee	1986 Physician Task Force
Poverty indicator	40% or more of county families below poverty level (twice the national poverty rate)	25% or more of county population below poverty level (twice the national poverty rate)	20% or more of county population below poverty level (selected by judgment)
Food-assistance indicator	Less than 25% of poor receive federal food stamps or commodity assistance (selected by judgment)	Less than 33% of poor receive federal food assistance	The 150 counties with the lowest food stamp participation rates (coincidentally, the 33% rate)
Other-assistance indicator	Less than 25% of poor receive welfare assistance		
Health indicator	Postneonatal mortality of 15 in 1,000 or greater (twice the national average)		
Selection criteria	Exceeds critical levels of at least 3 of the 4 indicators	Exceeds critical levels of both indicators	Exceeds critical levels of both indicators

Source: Citizens' Board of Inquiry into Hunger and Malnutrition in the United States, Hunger, U.S.A. (Boston: Beacon Press, 1968); U.S. Congress, Senate, Select Committee on Nutrition and Human Needs, Hunger 1973 (Washington, D.C.: 1973); and Physician Task Force on Hunger in America, Hunger Counties 1986--The Distribution of America's High-Risk Areas (Cambridge: Harvard University, 1986).

examples will illustrate our point: alternative sources of food and the purchasing power of the dollar. County-to-county variation in either of these factors could help account for county-to-county variation in hunger.

People who are poor by income standards may have enough to eat, even though they do not use food stamps. For example, farmers who depend on their crops and students who depend on their parents may show low income but have sufficient food. Some people may have access to private food donations or other programs that provide funds for food--Aid to Families with Dependent Children, the Child Care Food Program, the School Lunch and School Breakfast programs, the Summer Food Service Program, Supplemental Security Income, or the Special Supplemental Food Program for Women, Infants, and Children. As a consequence, using poverty and food stamp participation as indicators may overstate hunger in some counties.

County-to-county variations in purchasing power also could account for variations in the degree of hunger. If purchasing power varies while the sources of food are held constant, persons with low purchasing power will tend to be more hungry than those with high purchasing power.

If errors in different directions cancelled each other out within every county, the distribution of counties would not be affected, but we suspect that the method of the task force would not be this evenhanded. The error could overstate the degree of hunger in some counties, with the consequence that these counties would rank higher in the list of "hunger counties" than they should and others would rank lower than they should. We believe that the distribution of "hunger counties" determined by the method of the task force could be substantially at variance with the actual distribution of persons who suffer from hunger, but we do not know for sure, because there is an uncertain link between the indicators the task force used and true measures of hunger.

Inaccuracies in the reported distribution of hunger could also arise from factors we discussed above. Although we expressed no serious concern about the poverty indicator, we discussed four concerns about the participation indicator. They arose from (1) not accounting for assets in the definition of eligibility, (2) using a relative indicator rather than an absolute one, (3) inconsistently combining monthly and yearly data to estimate participation, and (4) adjusting for change in the participation rate between 1979 and 1984.

Overall, we have serious doubts about the method used to determine the geographic distribution of hunger that was reported in Hunger Counties 1986. We are not convinced that the method reveals the county-level distribution of persons who chronically experience underconsumption of food and other nutrients. Therefore, we doubt whether the 150 "hunger counties" represent the areas of most extreme need.

7. SUMMARY, CONCLUSIONS, AGENCY COMMENTS, AND OUR RESPONSE

SUMMARY AND CONCLUSIONS

Hunger Counties 1986 has methodological limitations that cast serious doubt on the accuracy of the estimated distribution of hunger by counties. Table 1.2 on the next page summarizes the limitations (some of which are listed in the task force report), categorizes their sources (indicator, data base, analysis), and indicates the probable effects of the limitations and our judgment of their magnitude.

The cutoff values for poverty and food stamp participation, though not affecting the accuracy of distributions, do determine how many counties are designated as extreme cases. The setting of cutoff values is essentially a judgment process, but history and tradition may play a role. Although we have observed that the task force cutoff values departed from values that have been used in the past, the judgments the task force made do not constitute methodological limitations.

One of our greatest concerns is that the task force method is based conceptually on the relative number of hungry persons in a county. With this premise, attention is directed not at counties where there may possibly be large numbers of hungry persons but at counties where the proportion of food stamp participants is small. We are also concerned that the indirect measurement of hunger through indicators of poverty and food stamp participation may not present an accurate picture of the distribution of hunger among counties in the United States. Thus, even if the technical problems with the data base and analysis method that we noted could be overcome, we would still find the task force approach questionable.

Determining the distribution of hunger in the United States is difficult. The Physician Task Force on Hunger in America sought to overcome the difficulty in a number of ways. Sometimes it was successful and sometimes not. For some of the limitations we observed, we see no good way to circumvent the problem. For others, we believe that the task force could have chosen more appropriate strategies.

In sum, we have substantial reservations about the method used by the task force to determine the distribution of hunger in the United States. Consequently, we doubt that the 150 "hunger counties" identified by the task force are the areas of the country in greatest need of relief from hunger. Above all, the problem is even more basic; it is not clear that the fundamental relationship between hunger and food stamp program participation underlying the task force report can produce an accurate estimate (no matter how methodologically sound the procedure), since this relationship has not been demonstrated.

We received comments on a draft of this report from the Food and Nutrition Service of the U.S. Department of Agriculture and

Table 1.2

Summary of Methodological Limitations in Hunger Counties 1986

Limitation	Source	Probable effect	Magnitude
Use of 1979 data for poverty indicator[a]	Data base	Inaccurate distributions of poverty and hunger	Minor
Insensitivity to absolute numbers of food stamp nonparticipants	Indicator	Inattention to absolute degree of nonparticipation and hunger in populous counties	Major
Use of participation data for 1 month rather than 1 year[a]	Data base	Inaccurate distributions of food stamps and hunger	Minor
Insensitivity to assets test for food stamps[a]	Data base	Inaccurate distributions of food stamps and hunger	Major
Use of regional averages to update number of persons eligible for food stamps[a]	Data base	Inaccurate distributions of food stamps and hunger	Major
Monthly and annual data combined in participation indicator	Data base, analysis	Inaccurate distributions of nonparticipants and hunger	Major
Sampling error in estimating number of persons eligible for food stamps[a]	Data base	Inaccurate distributions of nonparticipants and hunger	Minor
Inattention to low participation rates in low-poverty counties	Analysis	Inaccurate distributions of nonparticipants and hunger; inappropriate inference about association of hunger and food stamp participation	Major
Indirect measurement of hunger	Indicator, data base	Inaccurate distribution of hunger	Major

[a]Limitation listed by the Physician Task Force.

from the Physician Task Force on Hunger in America. Their letters are printed in appendixes V and VI.

OUR RESPONSE TO ADVANCE COMMENTS FROM THE FOOD AND NUTRITION SERVICE

The Food and Nutrition Service (FNS) has raised six main and several minor points. We have addressed the minor points where appropriate in the text of the final version of the report. The main points are discussed below.

Point 1

According to FNS, our report is a fair and evenhanded discussion of the technical aspects of the task force report entitled Hunger Counties 1986. No response is needed.

Point 2

FNS believes that our report concludes that the approach of the task force has conceptual as well as methodological problems and agrees with this conclusion. FNS also believes that greater emphasis should have been given to the conceptual flaws. We believe that we took care to present the evidence we found and the conclusions we drew from this evidence. However, we made some minor changes in the final report to clarify our views about conceptual weaknesses in the task force approach.

Point 3

FNS says that we should have emphasized the fact that the cutoff value the task force used for the participation indicator was not determined a priori by the choice of a 33-percent participation rate but was, instead, a function of the estimated participation rate of the county listed 150th in the task force's rank ordering of counties. Although we made this point several times in the draft report, FNS officials stated that our description of the cutoff as a function of county rankings occurred rather near the end of the draft. Therefore, we modified the final draft to introduce this point closer to the beginning.

Point 4

FNS believes that we should have given more attention to the fact that poverty data used in the task force report are old. Not only do the 1979 data not represent conditions in 1984, the base year for the task force calculations according to FNS; they also do not represent conditions in 1986, the year indicated in the title, Hunger Counties 1986. We specifically discussed this issue and believe we have given it appropriate attention.

Point 5

FNS says that the list of counties the task force presented as "hunger counties" is an artifact of the indicators the task force used rather than a true or accurate portrayal of the geographic distribution of hunger. In response, we can only reiterate the point we make in the report that the limitations of the approach the task force used almost certainly introduce inaccuracies into its findings and that, therefore, we doubt that the 150 "hunger counties" identified by the task force are the areas of the country in greatest need of relief from hunger.

Point 6

FNS believes that the use of July 1984 data to represent the number of food stamp recipients is a major rather than minor concern. FNS says that in July, food stamp participation is typically at a low ebb in comparison with other months, both nationally and in the counties. According to FNS, few counties deviate from the overall national pattern of participation, so that the use of July 1984 data seriously understates the number of participants for most, if not all, counties.

In our draft, we stated that the total number of food stamp participants in July 1984 was somewhat lower than in January, April, or October of that year for the 134 "hunger counties" for which we had data. Thus, the use of the July data indicates an underestimate. Only if the amount of the underestimate varies across counties would the distribution of counties be affected. We do not have much information about county-to-county variation, but our judgment is that the use of July 1984 data is a minor concern.

OUR RESPONSE TO ADVANCE COMMENTS FROM THE PHYSICIAN TASK FORCE ON HUNGER IN AMERICA

The chairman and representatives of the task force have raised several issues that we have resolved where appropriate in our final report. They raised two other points that we discuss below.

Point 1

The task force says that its analysis of hunger in 1986 was designed to identify counties where food stamp participation was low and where need was great, for the purpose of furthering current field investigations in high-risk areas. The task force says that its analysis represents the most appropriate methodology for locating the counties in which the federal food stamp program serves the fewest people. The task force adds that a careful reading of the GAO report confirms the validity of the approach the task force took and raises a larger question with which it disagrees.

The task force states that, in its own report, it clearly identified its own methodological limitations. It agrees with our reiteration of them and agrees that more refined data, were they available, would strengthen the ability to identify the counties whose residents have the greatest nutritional risk.

We believe that the task force statement that its analysis "represents the most appropriate methodology for locating counties in which the federal food stamp program serves the fewest people" illustrates our major points of disagreement. First, however good the methodology may be for locating the counties that provide few persons with food stamps, we believe the task force approach does not determine the distribution of hunger in the nation. As we discuss in our report, the indirect estimation of hunger through indicators of poverty and food stamp participation is a major limitation of the task force approach.

Second, we question whether the task force methodology is even appropriate for identifying counties with low food stamp participation. As we state in our report, the task force method, by using a ratio comparing food stamp participants with estimates of the number of persons eligible for food stamps, is not good for identifying counties with large numbers of eligible but nonparticipating persons--a reasonable definition of low participation.

We do not agree at all with the task force statement that our report confirms the validity of its approach. On the contrary, we believe that the limitations of the task force approach we described above are sufficient to vitiate the overall integrity and credibility of the report.

Point 2

The task force says that it disagrees with our report on one point: the existence of hunger in the counties it identified.

We never contested the statement that hunger exists in the 150 counties. Hunger may very well exist in those counties as well as others; this was not the point. We believe, however, that the approach taken by the task force did not identify the counties in the greatest need of relief from hunger.

APPENDIX I

REQUEST LETTER

LEON E. PANETTA, CALIFORNIA
CHAIRMAN
DAN GLICKMAN, KANSAS
HARLEY O. STAGGERS, JR., WEST VIRGINIA
JERRY HUCKABY, LOUISIANA
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ROBERT J. FERSH
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E. THOMAS COLEMAN, MISSOURI
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TOM LEWIS, FLORIDA
EDWARD R. MADIGAN, ILLINOIS
EX OFFICIO MEMBER

LYNN F. GALLAGHER
MINORITY CONSULTANT

U.S. House of Representatives
Committee on Agriculture
Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition
Room 1301, Longworth House Office Building
Washington, DC 20515

February 5, 1986

Mr. Charles A. Bowsher
Comptroller General of the United States
General Accounting Office
Washington, D.C. 20548

Dear Mr. Bowsher:

In January, 1986, the Harvard University School of Public Health issued a report listing several counties across the United States as "hunger counties", in which, the report states, participation in the food stamp program is too low and at least one-third of those who are eligible do not receive food stamps. Seventeen of the counties listed are in Missouri. As members of the Subcommittee with jurisdiction over the food stamp program and Representatives of districts in Missouri, we are concerned about this report and the conclusions drawn in the report.

After preliminary discussions with staff members of your Program Evaluation and Methodology Division, we request that GAO provide a review of this report with specific focus on the technical soundness of the conclusions.

In particular, we will appreciate your examination of:

* Methods used in the study (e.g. the basis for the conclusions reached in the report; the methods used by the authors in analyzing data and drawing conclusions from the data)

* The indicators adopted in the study for the identification of the "hunger counties" (e.g. whether participation in other federal food assistance programs was considered in determining the selection of counties; whether donations from private sources for food assistance were considered in determining the selection of counties; how the parameters for selection of the counties were set)

* Data used in the study (e.g. the use of county-wide data as based on data from the Census Bureau; the comparison of data based on monthly statistics with statistics collected annually; the use of Census Bureau data on income to equate to food stamp eligibility without regard to other factors of the food stamp eligibility)

We will appreciate your prompt attention to our request. It you have any questions concerning this request, please call Lynn Gallagher at 225-0171.

With kind regards.

Sincerely,

C. Thomas Coleman
Member of Congress

Bill Emerson
Member of Congress

BIBLIOGRAPHY

CITIZENS' BOARD of Inquiry into Hunger and Malnutrition in the United States. Hunger, U.S.A. Boston: Beacon Press, 1968.

PHYSICIAN TASK Force on Hunger in America. Hunger Counties 1986--The Distribution of America's High-Risk Areas. Cambridge: Harvard University, 1986.

-----. Hunger in America: The Growing Epidemic. Cambridge: Harvard University, 1985.

URBAN INSTITUTE. The Effects of Legislative Changes in 1981 and 1982 on the Food Stamp Program. Vol. 1. Final Report to Congress. Washington, D.C.: 1985.

U.S. CONGRESS, Senate, Committee on Agriculture, Nutrition, and Forestry. Food Stamp Program: History, Description, Issues, and Options. Washington, D.C.: 1985.

-----, Select Committee on Nutrition and Human Needs. Hunger 1973. Washington, D.C.: 1973.

U.S. DEPARTMENT OF AGRICULTURE, Food and Nutrition Service. Food Stamp Program Statistical Summary of Operations. Washington, D.C.: 1985.

-----. Assets of Low-Income Households: New Findings on Food Stamp Participants and Nonparticipants. Washington, D.C.: January 1981.

U.S. DEPARTMENT OF COMMERCE, Bureau of the Census. Characteristics of Population Below the Poverty Level: 1981. Washington, D.C.: 1983.

-----. Characteristics of the Population. Vol. 1, Ch. C, part 48. Virginia. Washington, D.C.: 1983.

-----. City-County Data Book: 1983. Washington, D.C.: 1983.

-----. Estimates of Poverty Including the Value of Noncash Benefits: 1984. Washington, D.C.: 1985.

-----. Money Income and Poverty Status of Families and Persons in the United States: 1984. Washington, D.C.: 1985.

THE CURRENT DEFINITION OF POVERTY

The following passage is reprinted from U.S. Department of Commerce, Bureau of the Census, Estimates of Poverty Including the Value of Noncash Benefits: 1984 (Washington, D.C.: 1985), p. 79.

> "Families and unrelated individuals are classified as being above or below the poverty level using the poverty index originated at the Social Security Administration in 1964 and revised by Federal Interagency Committees in 1969 and 1980. The poverty index is based solely on money income and does not reflect the fact that many low-income persons receive noncash benefits such as food stamps, Medicaid, and public housing. The index is based on the Department of Agriculture's 1961 Economy Food Plan and reflects the different consumption requirements of families based on their size and composition. It was determined from the Department of Agriculture's 1955 Survey of Food Consumption that families of three or more persons spend approximately one-third of their income on food; the poverty level for these families was, therefore, set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher in order to compensate for the relatively larger fixed expenses of these smaller households. The poverty thresholds are updated every year to reflect changes in the CPI. . . .
>
> "The poverty definition was modified slightly in 1981 based on recommendations made by the Federal Interagency Committee. These revisions (1) eliminated distinctions made between families with a female householder, no husband present, and all other families; (2) eliminated the distinctive poverty levels used for nonfarm and farm residence categories; and (3) expanded the matrix of poverty levels to include eight-person families, and nine-or-more person families that previously had been limited to seven persons or more.
>
> "An evaluation of the effect of this change showed that in 1980 the estimated poverty rate was 13.2 percent based on the revised definition compared to 13.0 percent using the definition prior to revision."

THE 150 "HUNGER COUNTIES" LISTED

IN HUNGER COUNTIES 1986

State and county	1979 population below poverty	1984 needy and on food stamps	County rank
Alabama			
Coosa	24.68%	29.89%	129
Arkansas			
Cleburne	20.14%	26.49%	108
Bradley	26.24	27.53	115
Madison	21.18	29.77	128
Polk	22.98	30.20	133
Searcy	30.60	31.30	142
Marion	23.46	31.95	148
Arizona			
Navajo	29.66%	26.78%	111
Coconino	20.37	30.97	137
Colorado			
Baca	20.63%	10.65%	37
Dolores	22.74	18.48	65
Florida			
Alachua	23.55%	24.87%	97
Suwannee	23.91	26.67	109
Walton	22.61	30.01	130
Franklin	28.25	31.72	145
Georgia			
Towns	22.66%	21.49%	76
Union	26.17	22.88	83
Glascock	20.73	27.54	117
Echols	25.60	30.95	136
Clarke	20.67	31.99	149
Idaho			
Madison	27.52%	4.17%	5
Owyhee	28.01	25.01	99
Washington	20.14	27.84	120
Illinois			
Jackson	22.33%	25.04%	100
Iowa			
Ringgold	24.74%	18.62%	66
Davis	22.03	24.03	90

APPENDIX IV

State and county	1979 population below poverty	1984 needy and on food stamps	County rank
Minnesota			
Lincoln	22.06%	13.57%	48
Todd	20.92	21.61	77
Morrison	20.51	25.69	105
Mahnomen	23.97	26.30	107
Clearwater	22.13	31.24	140
Missouri			
Putnam	20.85%	14.58%	51
Mercer	20.14	17.29	58
Scotland	20.26	17.33	60
Sullivan	20.58	17.33	61
Knox	22.89	17.43	62
Worth	20.25	21.26	72
Howell	21.29	22.10	79
Texas	20.79	23.23	86
McDonald	22.11	24.04	91
Hickory	25.46	24.46	94
Madison	21.70	25.43	102
Bollinger	24.06	25.46	103
Wright	23.33	25.58	104
Oregon	28.57	27.61	119
Douglas	24.94	29.41	125
Ozark	25.44	29.56	126
Dent	20.17	31.06	139
Montana			
Petroleum	32.77%	3.20%	2
Golden Valley	22.42	3.44	3
Carter	25.03	4.33	6
McCone	22.13	4.44	7
Garfield	22.68	4.51	8
Prairie	31.44	5.00	9
Wibaux	20.64	17.83	64
Nebraska			
Blaine	28.14%	7.91%	22
Wheeler	20.94	7.92	23
Nance	20.82	8.65	28
Sherman	20.05	9.27	32
Logan	25.53	9.96	34
Antelope	23.15	10.01	35
Greeley	29.09	10.06	36
Boyd	23.78	11.74	44
Knox	20.23	19.04	68
Morrill	22.29	29.71	127
Nevada			
Eureka	24.22%	1.71%	1

APPENDIX IV

State and county	1979 population below poverty	1984 needy and on food stamps	County rank
New Mexico			
Catron	22.98%	21.29%	74
Union	21.28	24.69	95
Sierra	22.35	27.15	113
De Baca	20.06	28.39	122
Roosevelt	27.19	31.28	141
North Carolina			
Watauga	22.74%	20.28%	69
Ashe	22.81	22.53	81
Clay	22.84	27.60	118
Beaufort	21.01	31.89	147
Cherokee	22.22	32.02	150
North Dakota			
Slope	22.86%	6.04%	13
Hettinger	20.92	6.59	15
Dunn	21.10	9.62	33
Emmons	24.65	11.30	41
Kidder	28.53	11.48	42
McIntosh	24.27	11.75	45
Sheridan	23.12	14.13	50
Logan	22.76	15.32	53
Grant	32.36	20.64	71
Sioux	32.50	22.46	80
Benson	23.25	27.09	112
Oklahoma			
Johnston	30.63%	28.93%	124
South Dakota			
Harding	23.79%	3.76%	4
Campbell	30.88	5.00	10
Faulk	31.20	5.04	11
Clark	25.73	5.75	12
Douglas	29.11	6.50	14
Hanson	31.27	6.88	16
Hamlin	23.72	7.03	17
Potter	21.03	7.08	18
Sully	21.78	7.31	19
Kingsbury	20.11	7.56	20
Hand	28.40	7.72	21
Haakon	20.58	8.03	24
Edmunds	24.27	8.09	25
Hutchinson	23.49	8.11	26
Bon Homme	22.53	8.55	27
McPherson	27.24	8.79	29
Spink	20.03	9.17	30
Miner	32.50	9.19	31
Aurora	24.00	11.07	39
Deuel	23.55	11.14	40

APPENDIX IV

State and county	1979 population below poverty	1984 needy and on food stamps	County rank
(South Dakota)			
Sanborn	35.12%	11.51%	43
Marshall	22.83	14.90	52
Hyde	23.19	16.44	55
Jerauld	20.26	16.55	56
Brule	24.71	17.30	59
Corson	41.49	27.52	114
Gregory	25.77	27.54	116
Dewey	35.45	30.04	131
Tennessee			
Pickett	28.47%	20.17%	121
Texas			
Brazos	22.27%	11.78%	46
Motley	28.70	13.01	47
Wilbarger	20.22	16.37	54
Mason	20.47	16.68	57
Glasscock	23.01	17.78	63
Parmer	21.98	18.67	67
Hays	22.24	20.44	70
San Saba	24.22	21.29	73
McCulloch	20.82	21.30	75
Briscoe	25.82	21.79	78
Gaines	21.35	22.82	82
Haskell	20.88	22.89	84
Brewster	21.88	23.14	85
Dickens	26.95	23.29	87
Jeff Davis	24.89	23.56	88
Caldwell	29.09	23.62	89
Concho	21.51	24.08	92
Menard	28.29	24.39	93
Limestone	23.11	24.71	96
Collingsworth	26.33	24.96	98
Mitchell	21.38	25.88	106
Real	34.22	26.74	110
Leon	24.38	28.89	123
Knox	22.90	30.16	132
Swisher	25.11	30.55	134
Red River	25.96	30.87	135
Walker	20.77	31.00	138
Milan	21.99	31.44	144
Sabine	21.34	31.88	146
Utah			
Wayne	22.34%	11.06%	38

State and county	1979 population below poverty	1984 needy and on food stamps	County rank
Virginia			
Charles City[a]	25.31%	13.71%	49
Mecklenburg	20.73	25.33	101
West Virginia			
Pendleton	20.27%	31.32%	143

[a]Charles City, Virginia, is listed in the task force report as having 25.3 percent of the population below 100 percent of the poverty level in 1979 but in two Bureau of the Census publications, County-City Data Book: 1983 and Characteristics of the Population for Virginia, the figure is 12.8 percent for Charles City. In the two Census publications, Charlotte, Virginia, the county following Charles City, is listed as having 25.3 percent of the population below 100 percent of the poverty level in 1979.

ADVANCE COMMENTS FROM

THE FOOD AND NUTRITION SERVICE

In a March 11, 1986, meeting, FNS commented orally on a draft of this report. FNS had six major points, which we characterize below. FNS has reviewed this list of points and agrees that we have accurately represented them.

1. FNS considers our report a fair and evenhanded discussion of the technical aspects of the Physician Task Force report entitled Hunger Counties 1986.

2. FNS agrees with our conclusion that the task force approach has both conceptual and methodological problems. FNS believes, however, that in our concluding summary we should have given greater emphasis to the conceptual flaws in the task force report.

3. According to FNS, we should have emphasized the fact that the task force food stamp participation indicator "cutoff" was not determined by the choice of a 33-percent participation rate but, rather, was a function of the estimated participation rate of the 150th county in the rank ordering of counties.

4. We should have given more attention to the fact that the poverty data in the task force report were 1979 data and significantly outdated. FNS believes that the data do not represent conditions in 1984 (the base year of the task force calculations) or conditions in 1986 (the year indicated in the title, Hunger Counties 1986).

5. FNS believes that the list of "hunger counties" is an artifact of the indicators and methods used by the task force rather than a true or accurate portrayal of the geographic distribution of hunger.

6. FNS would characterize the use of July 1984 data as a major, rather than a minor, concern. July is typically a low ebb in food stamp participation in comparison with other months on both the national and county levels. Few counties deviate from the overall national seasonal pattern of participation and, thus, the use of July 1984 data to characterize food stamp recipients seriously understates the number of participants for most, if not all, counties.

ADVANCE COMMENTS FROM THE PHYSICIAN TASK FORCE ON HUNGER IN AMERICA

HARVARD UNIVERSITY
SCHOOL OF PUBLIC HEALTH
PHYSICIAN TASK FORCE ON HUNGER IN AMERICA

Statement Regarding GAO Report

Our analysis of hunger counties in 1986 is designed to identify low food stamp participation counties where need is great, for the purpose of current field investigations in high-risk areas. Based on existing data, this analysis represents the most appropriate methodology for locating counties in which the federal food stamp program serves the fewest people. A careful reading of this GAO report confirms the validity of our approach, while raising a larger question over which we disagree.

Methodological limitations were clearly identified by us in our own report. GAO has reiterated them here. We also are in agreement that were more refined data available, it could strengthen our ability to locate counties of greatest nutritional risk. The USDA Food and Nutrition Service does not collect and analyze such information presently.

We do differ with GAO on one point: the existence of hunger in the counties we identified. GAO limited its analysis to statistics and could not confirm this relationship. Since January, however, our teams of physicians have conducted site investigations in hunger counties in seven states in several regions of the nation. The physicians are confirming serious hunger in each county they inspect. The results of these further investigations will be reported to Congress in May, 1986.

For now the essential issue is that neither doctors nor Congressmen nor government agencies should focus exclusively on research designs while extensively-documented hunger poses a serious threat to public health. Whether hunger county #130 might have been ranked #149 instead is far less important than the fact that physicians are confirming hunger through actual field investigations. This confirmation comes on the heels of fifteen recent national reports, all concluding that domestic hunger is a serious and growing problem.

The fundamental question is on which side does this nation choose to err: awaiting a theoretically "perfect" study, or making a purposeful response to a substantial body of evidence. While technical questions can be raised about any study, we believe that the goal of ending hunger will be better served if hungry Americans are fed now. As physicians and health professionals, it is our opinion that empty stomachs should not be ignored while those of us who are not hungry debate methodological finepoints.

J. Larry Brown
Chairman

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